AMENDMENTS TO THE DRAWINGS

Replacement FIGURES 6E and 6G are attached.

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REMARKS

The present amendment and Request for Reconsideration is filed in response to the Office Action mailed November 29, 2006.

Applicants' attorney would like to thank the Examiner for the telephone interview held on December 5, 2006. During the interview, the rejected claims were discussed in light of the Ross et al., Hecht, and Moriyama references. No agreement was reached with respect to the rejected claims.

In the Office Action, the Examiner objected to the title as not being descriptive. Applicants have changed the title to be more reflective of the claimed invention.

The Examiner has also objected to the drawings as not showing a cooling channel. As pointed out to the Examiner during the telephone interview, a cooling channel is shown in FIGURE 6G of the drawings. However, applicants have added reference number 515 to more easily identify the cooling channel. In addition, applicants are submitting a revised FIGURE 6E to correct the fact that the reference number 470 was used for two different components. It is requested that the Examiner review the revised figures and enter them into the application.

Claims 56 and 59 were objected to because a channel is recited instead of cooling channel. Applicants have amended the claims as requested by the Examiner. Claims 56-59 were also rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because it was not clear from the drawings or specification how the circuit board may be fitted into a channel of the heat exchanger. As discussed with the Examiner during the interview, in one embodiment of the invention, the circuit board is seated against the lip 512 that extends around the inner surface of the front face of the heat exchanger to form a bonding surface to secure the circuit board in the cooling channel. See pages 24, lines 8-23. It is therefore requested that the Examiner withdraw the objection to the claims.

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Claims 12-17, 32-36, 56, 58, 61-63, 65-67, and 69 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Ross et al. (2002/0193664) in view of Moriyama (5,976,074) and in further view of Hecht (6,871,993). Claim 37 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ross et al. in view of Hecht, and Claim 59 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Ross et al. Applicants respectfully traverse the rejections.

Applicants respectfully submit that nothing in the combination of references cited by the Examiner teach or suggest the claimed combination of features of Claim 12 including an imaging assembly with a hollow cylindrical cap having a cavity therein and a front face through which illumination light passes in an imaging port, a heat exchanger received within the cavity of the cap that includes a cooling channel having an inlet and an outlet in which a cooling material is passed and a recess, one or more light emitting diodes mounted on a circuit board that is in thermal contact with the cooling channel, a lens assembly that is positioned in the recess of the cooling channel to be aligned between the imaging port and a solid state imaging device secured to the heat exchanger. Dependent Claims 13-17, 56, and 57 depend from and further define Claim 12 and are allowable for at least that reason. Therefore, Claim 12 and the claims that depend thereon are allowable.

With respect to Claim 32, it is submitted that the combination of references does not disclose the features of Claim 32 including an imaging system with a cap having a hollow internal cavity with a front face through which illumination light passes and a heat exchanger that is fitted within the internal cavity of the cap including one or more light emitting diodes mounted on a circuit board, an image sensor, a cooling channel having an open face that is sealed by the circuit board such that a cooling material within the cooling channel is in thermal contact with one or more light emitting diodes and a recess into which a lens assembly is fitted and

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aligned with the image sensor. Claims 33-37, 55, and 60 depend from and further define Claim 32 and are allowable for at least that reason. Therefore, Claim 32 and the claims that depend thereon are allowable.

With respect to Claim 61, it is submitted that the cited combination of references do not teach or suggest an endoscope having a flexible shaft, a hollow cap at the distal end of the shaft including a front face with an opening to a working channel of the endoscope, a heat exchanger that is fitted within the cap including a cooling channel through which cooling liquid passes and a circuit board having one surface that contacts the cooling liquid in the channel and another surface on which one or more light emitting diodes are mounted. Claims 62-64 depend from and further define Claim 61 and are allowable for at least that reason. Therefore, Claim 61 and the claims that depend thereon are allowable.

With respect to Claim 65, it is submitted that the cited combination of references do not teach or suggest the combination of an endoscope having a shaft, a cap with an internal cavity and a front face positioned at the distal end of the shaft, and an insert that is fitted within the cavity of the cap behind the front face that includes an illumination source, a heat exchanger that supports the illumination source, the heat exchanger including a cooling channel through which liquid is passed and is warmed by heat from the illumination source, and an image sensor that produces image signals of the tissue. Claims 66-68 depend from and further define Claim 65 and are allowable for at least that reason. Therefore, Claim 65 and the claims that depend therefrom are allowable.

With respect to Claim 69, it is submitted that the cited combination of references do not teach or suggest an endoscope including a shaft, a cap at the distal end of the shaft, an insert that is fitted within the cap including one or more illumination sources that generate heat when producing illumination light, a heat exchanger including a cooling channel having an inlet and an

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outlet through which fluid is passed to remove heat from the end of the shaft, an image sensor that is supported by the heat exchanger between the inlet and outlet of the heat exchanger, and a lens assembly that focuses light onto the image sensor, wherein the cooling channel of the heat exchanger has a curved shape that forms a recess in the heat exchanger in which the lens assembly is positioned to focus light on the image sensor.

In addition, applicants have added new independent Claims 70 and 76. Applicants respectfully submit that nothing in the cited combination of references teaches or suggests the combination of features recited.

In light of the above, it is submitted that Claims 1, 32, 61, 65, 69, 70, and 76, as well as the claims that depend thereon, are allowable over the combination of references cited by the Examiner. It is therefore requested that the Examiner withdraw the rejections and pass this case to issue at the earliest possible date. If the Examiner has any additional questions regarding the application, he is invited to call applicants' attorney at the number listed below.

Respectfully submitted,

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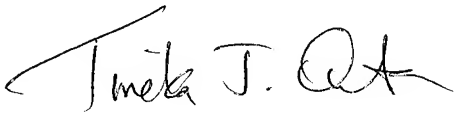

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